Amendments

This listing of claims will replace all prior versions, and listings of claims in the application.

1-90 (cancelled)

91. (previously presented) A method to determine the sensitivity of an animal with cancer to treatment with one or more chemotherapeutic agents, comprising

(a) contacting cancer cells taken from said animal with said one or more chemotherapeutic agents and a reporter compound having the Formula II:

$$R_1–(AA)_n–Asp–y–Asp–(AA)_n–R_1 \quad (II)$$

or the Formula V:

$$R_1–(AA)_n–Asp–y–R_6 \quad (V)$$

or a biologically acceptable salt of said compound or a tautomer of said compound or a biologically acceptable salt of said tautomer, wherein:

R_1 is an *N*-terminal protecting group;

each AA independently is a residue of an α-amino acid or β-amino acid, or a methyl, acetoxymethyl or methoxy ester of a carboxyl-containing α-amino acid or β-amino acid;

each n independently is 0-5;

y is a fluorogenic or fluorescent moiety; and

R_6 is a blocking group which is not an amino acid or a derivative of an amino acid;

under conditions whereby said one or more agents, either interacts with an external receptor or is taken into said cancer cells, and

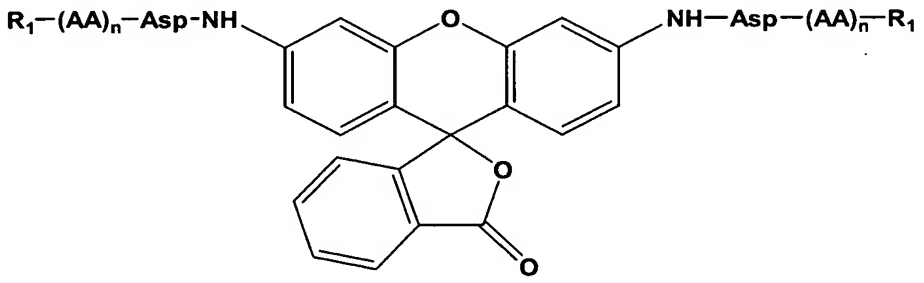
(b) recording the fluorescence of said cancer cells compared to control cells which have only been contacted with said reporter compound, wherein a change in fluorescence of said cancer cells compared to said control cells is an indication that said cancer cells are chemosensitive to said one or more chemotherapeutic agents and that said animal is sensitive to said treatment.

92. (previously presented) The method of claim 91, wherein R_6 is a blocking group which is selected from the group consisting of C_{1-12}alkyloxycarbonyl, $CH_3(OCH_2CH_2)_qOCO$-, $CH_3(CH_2)_r(OCH_2CH_2)_sOCO$-, C_{1-12}(alkylthio)carbonyl, aryl(C_{1-12})alkoxycarbonyl, H_2NCO-, $(CH_3)_2NCO$-, $(CH_3CH_2)_2NCO$-, $(CH_3(CH_2)_v)(CH_3)NCO$-, C_{1-12}alkylsulfonyl, C_{1-12}haloalkylsulfonyl, aryl(C_{1-12})alkylsulfonyl, Cl_3CCH_2OCO-, unsubstituted benzoyl, benzylcarbonyl, phenylsulfonyl and tosyl; wherein q is 2-4, r is 0-5, s is 1-4, and v is 1-9.

93. (previously presented) The method of claim 91, wherein $(AA)_n$-Asp is selected from the group consisting of HD, AD, TD, VD, LD, PD, ND, ED, YD, ID, EHD, VAD, ETD, EVD, HVD, ELD, GPD, EPD, GTD, LND, EED, SLD, VPD, EAD, SYD, LPD, EID, WEHD SEQ ID NO:1, YVAD SEQ ID NO:2, LEHD SEQ ID NO:3, DETD SEQ ID NO:4, DEVD SEQ ID NO:5, DEHD SEQ ID NO:6, VEHD SEQ ID NO:7, LETD SEQ ID NO:8, LEVD SEQ ID NO:9, SHVD SEQ ID NO:10, DELD SEQ ID NO:11, DGPD SEQ ID NO:12, DEPD SEQ ID NO:13, DGTD SEQ ID NO:14, DLND SEQ ID NO:15, DEED SEQ ID NO:16, DSLD SEQ ID NO:17, DVPD SEQ ID

NO:18, DEAD SEQ ID NO:19, DSYD SEQ ID NO:20, ELPD SEQ ID NO:21, VEID SEQ ID NO:26, IETD SEQ ID NO:24, IEPD SEQ ID NO:23 and VEPD SEQ ID NO:27.

94. (previously presented) The method of claim 91, wherein said compound is of formula III:



(III)

95. (previously presented) The method of claim 94, wherein said compound is selected from the group consisting of:

$(Z\text{-YVAD})_2$-Rhodamine 110, SEQ ID NO:2;

$(Z\text{-DEVD})_2$-Rhodamine 110, SEQ ID NO:5;

$(Z\text{-VAD})_2$-Rhodamine 110;

$(Z\text{-YVAD(OAM)})_2$-Rhodamine 110, SEQ ID NO:2;

$(Z\text{-LE(OAM)HD(OAM)})_2$-Rhodamine 110, SEQ ID NO:3;

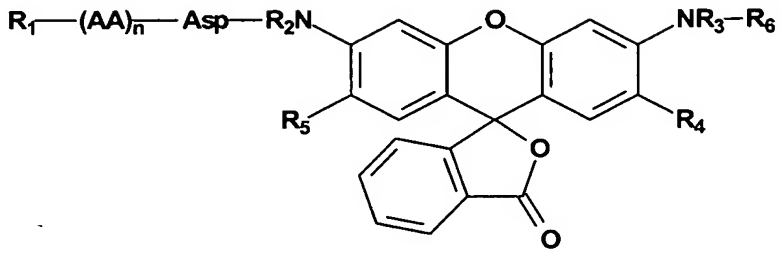
$(Z\text{-D(OAM)E(OAM)TD(OAM)})_2$-Rhodamine 110, SEQ ID NO:4;

$(Z\text{-D(OAM)E(OAM)VD(OAM)})_2$-Rhodamine 110, SEQ ID NO:5;

$(Z\text{-D(OMe)E(OMe)VD(OAM)})_2$-Rhodamine 110, SEQ ID NO:5; and

$(Z\text{-D(OMe)E(OMe)VD})_2$-Rhodamine 110 SEQ IS NO:5.

96. (previously presented) The method of claim 91, wherein said compound is of formula VII:



(VII)

wherein R_2 and R_3 independently are hydrogen, methyl or ethyl.

97. (currently amended) The ~~compound~~ method of claim 96, wherein R_1 is t-butyloxycarbonyl, acetyl, hexanoyl, octanoyl or benzyloxycarbonyl; and R_2, R_3, R_4 and R_5 are hydrogen.

98. (previously presented) The method of claim 96, wherein said compound is selected from the group consisting of:

N-(Z-YVAD)-*N'*-acetyl-Rhodamine 110, SEQ ID NO:2;

N-(Z-DEVD)-*N'*-acetyl-Rhodamine 110, SEQ ID NO:5;

N-(Z-VD)-*N'*-acetyl-Rhodamine 110;

N-(Z-AD)-*N'*-acetyl-Rhodamine 110;

N-(Z-VAD)-*N'*-acetyl-Rhodamine 110;

N-(Z-DEVD)-*N'*-ethoxycarbonyl-Rhodamine 110, SEQ ID NO:5;

N-(Ac-DEVD)-*N'*-ethoxycarbonyl-Rhodamine 110, SEQ ID NO:5;

N-(Ac-DEVD)-*N'*-hexyloxycarbonyl-Rhodamine 110, SEQ ID NO:5;

N-(Ac-DEVD)-*N'*-octyloxycarbonyl-Rhodamine 110, SEQ ID NO:5;

N-(Ac-DEVD)-*N'*-decyloxycarbonyl-Rhodamine 110, SEQ ID NO:5;

N-(Ac-DEVD)-*N'*-dodecyloxycarbonyl-Rhodamine 110, SEQ ID NO:5; and

N-(Ac-DEVD)-*N'*-(ethylthio)carbonyl-Rhodamine 110, SEQ ID NO:5;

wherein Z is benzyloxycarbonyl.

99. (previously presented) The method of claim 91, wherein said animal is a human.

100. (previously presented) A method for monitoring the treatment of an animal to treatment with one or more chemotherapeutic agents, comprising

(a) administering said one or more chemotherapeutic agents to said animal,

(b) contacting cells taken from said animal after said administering with a reporter compound having the Formula II:

$$R_1–(AA)_n–Asp–y–Asp–(AA)_n–R_1 \quad (II)$$

or the Formula V:

$$R_1–(AA)_n–Asp–y–R_6 \quad (V)$$

or a biologically acceptable salt of said compound or a tautomer of said compound or a biologically acceptable salt of said tautomer, wherein:

R_1 is an *N*-terminal protecting group;

each AA independently is a residue of an α-amino acid or β-amino acid, or a methyl, acetoxymethyl or methoxy ester of a carboxyl-containing α-amino acid or β-amino acid;

each n independently is 0-5;

y is a fluorogenic or fluorescent moiety; and

R_6 is a blocking group which is not an amino acid or a derivative of an amino acid;

under conditions whereby said reporter compound is taken into said cells, and

(c) recording the fluorescence of said cells contacted with said reporter compound compared to contol cells which have been taken from said animal before said administering,

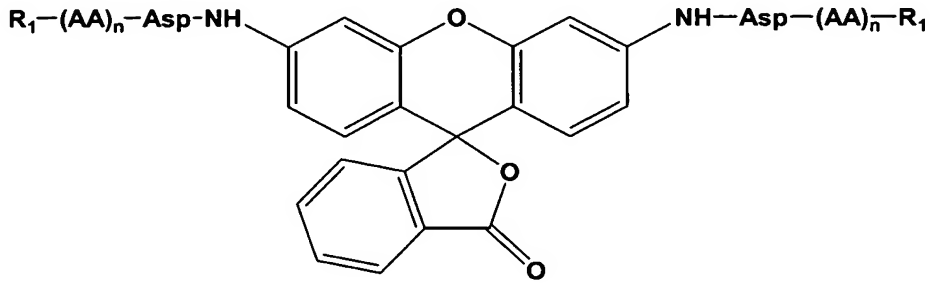
wherein a change in fluorescence of said cells taken from said animal compared to said control cells is an indication that said animal is sensitive to said chemotherapeutic agents.

101. (previously presented) The method of claim 100, wherein R_6 is a blocking group which is selected from the group consisting of C_{1-12}alkyloxycarbonyl, $CH_3(OCH_2CH_2)_qOCO$-, $CH_3(CH_2)_r(OCH_2CH_2)_sOCO$-, C_{1-12}(alkylthio)carbonyl, aryl(C_{1-12})alkoxycarbonyl, H_2NCO-, $(CH_3)_2NCO$-, $(CH_3CH_2)_2NCO$-, $(CH_3(CH_2)_v)(CH_3)NCO$-, C_{1-12}alkylsulfonyl, C_{1-12}haloalkylsulfonyl, aryl(C_{1-12})alkylsulfonyl, Cl_3CCH_2OCO-, unsubstituted benzoyl, benzylcarbonyl, phenylsulfonyl and tosyl; wherein q is 2-4, r is 0-5, s is 1-4, and v is 1-9.

102. (previously presented) The method of claim 100, wherein $(AA)_n$-Asp is selected from the group consisting of HD, AD, TD, VD, LD, PD, ND, ED, YD, ID, EHD, VAD, ETD, EVD, HVD, ELD, GPD, EPD, GTD, LND, EED, SLD, VPD, EAD, SYD, LPD, EID, WEHD SEQ ID NO:1, YVAD SEQ ID NO:2, LEHD SEQ ID NO:3, DETD SEQ ID NO:4, DEVD SEQ ID NO:5, DEHD SEQ ID NO:6, VEHD SEQ ID NO:7, LETD SEQ ID NO:8, LEVD SEQ ID NO:9, SHVD SEQ ID NO:10, DELD SEQ

ID NO:11, DGPD SEQ ID NO:12, DEPD SEQ ID NO:13, DGTD SEQ ID NO:14, DLND SEQ ID NO:15, DEED SEQ ID NO:16, DSLD SEQ ID NO:17, DVPD SEQ ID NO:18, DEAD SEQ ID NO:19, DSYD SEQ ID NO:20, ELPD SEQ ID NO:21, VEID SEQ ID NO:26, IETD SEQ ID NO:24, IEPD SEQ ID NO:23 and VEPD SEQ ID NO:27.

103. (previously presented) The method of claim 100, wherein said compound is of formula III:



(III)

104. (previously presented) The method of claim 103, wherein said compound is selected from the group consisting of:

$(Z\text{-YVAD})_2$-Rhodamine 110, SEQ ID NO:2;

$(Z\text{-DEVD})_2$-Rhodamine 110, SEQ ID NO:5;

$(Z\text{-VAD})_2$-Rhodamine 110;

$(Z\text{-YVAD(OAM)})_2$-Rhodamine 110, SEQ ID NO:2;

$(Z\text{-LE(OAM)HD(OAM)})_2$-Rhodamine 110, SEQ ID NO:3;

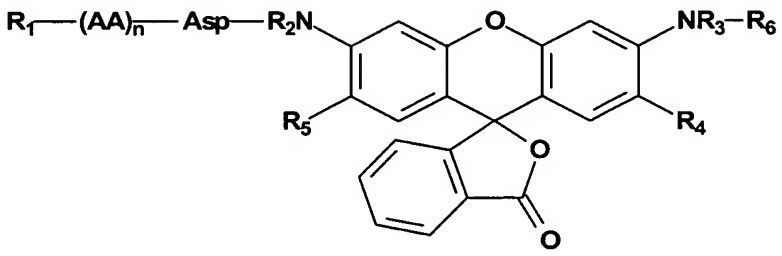
$(Z\text{-D(OAM)E(OAM)TD(OAM)})_2$-Rhodamine 110, SEQ ID NO:4;

$(Z\text{-D(OAM)E(OAM)VD(OAM)})_2$-Rhodamine 110, SEQ ID NO:5;

$(Z\text{-D(OMe)E(OMe)VD(OAM)})_2$-Rhodamine 110, SEQ ID NO:5; and

$(Z\text{-D(OMe)E(OMe)VD})_2$-Rhodamine 110 SEQ IS NO:5.

105. (previously presented) The method of claim 100, wherein said compound is of formula VII:



(VII)

wherein R_2 and R_3 independently are hydrogen, methyl or ethyl.

106. (currently amended) The ~~compound~~ method of claim 105, wherein R_1 is t-butyloxycarbonyl, acetyl, hexanoyl, octanoyl or benzyloxycarbonyl; and R_2, R_3, R_4 and R_5 are hydrogen.

107. (previously presented) The method of claim 105, wherein said compound is selected from the group consisting of:

N-(Z-YVAD)-*N'*-acetyl-Rhodamine 110, SEQ ID NO:2;

N-(Z-DEVD)-*N'*-acetyl-Rhodamine 110, SEQ ID NO:5;

N-(Z-VD)-*N'*-acetyl-Rhodamine 110;

N-(Z-AD)-*N'*-acetyl-Rhodamine 110;

N-(Z-VAD)-*N'*-acetyl-Rhodamine 110;

N-(Z-DEVD)-*N'*-ethoxycarbonyl-Rhodamine 110, SEQ ID NO:5;

N-(Ac-DEVD)-*N'*-ethoxycarbonyl-Rhodamine 110, SEQ ID NO:5;

N-(Ac-DEVD)-*N'*-hexyloxycarbonyl-Rhodamine 110, SEQ ID NO:5;

N-(Ac-DEVD)-*N'*-octyloxycarbonyl-Rhodamine 110, SEQ ID NO:5;

N-(Ac-DEVD)-*N'*-decyloxycarbonyl-Rhodamine 110, SEQ ID NO:5;

N-(Ac-DEVD)-*N'*-dodecyloxycarbonyl-Rhodamine 110, SEQ ID NO:5; and

N-(Ac-DEVD)-*N'*-(ethylthio)carbonyl-Rhodamine 110, SEQ ID NO:5;

wherein Z is benzyloxycarbonyl.

108. (previously presented) The method according to claim 100, wherein said animal suffers from a malady related to apoptotic cell death.